

34. The method of claim 33, wherein the *Euphorbia* species is selected from the group consisting of *Euphorbia peplus*, *Euphorbia drummondii* and *Euphorbia hirta*.

→ 35. The method of claim 33, wherein the compound comprises a composition selected from the group consisting of a jatrophone, a jatrophone derivative and a pharmaceutically acceptable salt of a jatrophone or a jatrophone derivative.

36. The method of claim 35, wherein the compound comprises a composition comprising a jatrophone ring conformation.

37. The method of claim 36, wherein the jatrophone ring containing composition is present in two diastereomeric conformations.

38. The method of claim 36, wherein the jatrophone ring containing composition is present in one diastereomeric conformation.

39. The method of claim 38, wherein the diastereomeric conformation is a conformation II.

40. The method of claim 36, wherein the composition comprising a jatrophone ring conformation comprises a nicotinate moiety.

41. The method of claim 36, wherein the composition comprising a jatrophone ring conformation comprises a benzoate moiety.

42. The method of claim 36, wherein the composition comprising a jatrophone ring conformation comprises a iso-butyrate moiety.

43. The method of claim 33, wherein the jatrophone derivative comprises an ester derivative.

44. The method of claim 33, wherein the jatrophone derivative comprises an acetylated derivative.

45. The method of claim 36, wherein the jatrophone derivative comprises a substitution in the jatrophone ring carbon 1 position of a moiety selected from the group consisting of a -H and a -OAc.

46. The method of claim 36, wherein the jatrophone derivative comprises a substitution in the jatrophone ring carbon 2 position of a moiety selected from the group consisting of a -H, a -OAc and a CH₃.

Q2
only
47. The method of claim 36, wherein the jatrophone derivative comprises a substitution in the jatrophone ring carbon 3 position of a moiety selected from the group consisting of a -OH, a -OAc, a -OiBu (O(CH₃)₂CHCO), a -OCinn, a -OBz, a -OBzOCH₂CO, and a -PhCH₂CH₂CO₂.

48. The method of claim 36, wherein the jatrophone derivative comprises a substitution in the jatrophone ring carbon 4 position of an -H.

49. The method of claim 36, wherein the jatrophone derivative comprises a substitution in the jatrophone ring carbon 5 position of a moiety selected from the group consisting of a -OAc, a -OiBu (O(CH₃)₂CHCO), -OMeBu (OCH₃CH₂CH(CH₃)CO) and a -OAcAc.

50. The method of claim 36, wherein the jatrophone derivative comprises a substitution in the jatrophone ring carbon 6 position of a moiety comprising an exocyclic double bond.

51. The method of claim 36, wherein the jatrophane derivative comprises a substitution in the jatrophane ring carbon 7 position of an -H₂, a -OAc, a -OiBu (O(CH₃)₂CHCO), a -OmeBu (OCH₃CH₂CH(CH₃)CO), a -OPr, a -OCOiPr and a -OCOEt.

52. The method of claim 36, wherein the jatrophane derivative comprises a substitution in the jatrophane ring carbon 8 position of an -H₂, a -OH, a -OAc, a -OiBu (O(CH₃)₂CHCO), a -OmeBu (OCH₃CH₂CH(CH₃)CO), a -OBz and a -OAng.

53. The method of claim 36, wherein the jatrophane derivative comprises a substitution in the jatrophane ring carbon 9 position of an -OH, a -OAc (-OCH₃CO), a -OCinn (OPhCHCHCO), a -ONic (C₅H₄NCO₂) and an = O.

54. The method of claim 36, wherein the jatrophane derivative comprises a substitution in the jatrophane ring carbon 10 position of a -(CH₃)₂.

55. The method of claim 36, wherein the jatrophane derivative comprises a substitution in the jatrophane ring carbon 11 and carbon 12 positions comprising a double bond between carbon 10 and carbon 11.

56. The method of claim 36, wherein the jatrophane derivative comprises a substitution in the jatrophane ring carbon 13 position of a -(CH₃).

57. The method of claim 36, wherein the jatrophane derivative comprises a substitution in the jatrophane ring carbon 14 position of an -H, an -OH, a -OAc (OCH₃CO) and an = O.

58. The method of claim 36, wherein the jatrophane derivative comprises a substitution in the jatrophane ring carbon 15 position of an -OH and a -OAc (OCH₃CO).

59. The method of claim 35, wherein the composition comprises a 2,3,5,7,15-pentaacetoxy-9-nicotinoyloxy-14-oxojatropha-6(17),11E-diene (jatropha 1) or a pharmaceutically acceptable salt.

60. The method of claim 35, wherein the composition comprises a 2,5,7,8,9,14-hexaacetoxy-3-benzoyloxy-15-hydroxy-jatropha-6(17),11E-diene (jatropha 2) or a pharmaceutically acceptable salt.

61. The method of claim 35, wherein the compound comprises a 2,5,14-triacetoxy-3-benzoyloxy-8,15-dihydroxy-7-isobutyroyloxy-9-nicotinoyloxyjatropha-6(17), 11E-diene (jatropha 3) or a pharmaceutically acceptable salt of these.

62. The method of claim 35, wherein the compound comprises a 2,5,9,14-tetraacetoxy-3-benzoyloxy-8,15-dihydroxy-7-isobutyroyloxyjatropha-6(17),11E-diene (jatropha 4) or a pharmaceutically acceptable salt of these.

63. The method of claim 35, wherein the compound comprises a 2,5,7,14-tetraacetoxy-3-benzoyloxy-8,15-dihydroxy-9-nicotinoyloxyjatropha-6(17),11E-diene (jatropha 5) or a pharmaceutically acceptable salt of these.

64. The method of claim 35, wherein the compound comprises a 2,5,7,9,14-pentaacetoxy-3-benzoyloxy-8,15-dihydroxyjatropha-6(17),11E-diene (jatropha 6) or a pharmaceutically acceptable salt of these.

65. The method of claim 33, wherein the compound comprises a composition selected from the group consisting of a pepluane, a pepluane derivative and a pharmaceutically acceptable salt of a pepluane or a pepluane derivative.

66. The method of claim 65, wherein the pepluane derivative comprises an ester derivative.

67. The method of claim 65, wherein the pepluane derivative comprises an acetylated derivative.

68. The method of claim 65, wherein the pepluane derivative comprises a substitution in a position in a pepluane skeleton selected from the group consisting of

a2
and

- an -H₂ or an -OAc (-OCH₃CO) at a carbon 1 position;
- a -CH₃ and an -H at a carbon 2 position;
- an -OBz at a carbon 3 position;
- an -H at a carbon 4 position;
- an -OAc (-OCH₃CO) at a carbon 5 position;
- a -CH₃ or an -CH₂OAc at a carbon 6 position;
- an -H₂ at a carbon 7 position;
- an -OAc (-OCH₃CO) or a double bond to C12 at a carbon 8 position;
- an -OAc (-OCH₃CO) or a double bond to C18 at a carbon 9 position;
- a -CH₃ and an -OAc (-OCH₃CO), a -CH₃, or a double bond to C11 at a carbon 10 position;
- an -H₂ or a double bond to C10 at a carbon 11 position;
- an -H or a double bond to C8 at a carbon 12 position;
- a -CH₃ at a carbon 13 position;
- an -OAc (-OCH₃CO) at a carbon 14 position;
- an -OH at a carbon 15 position; and,
- an -H or an -H₂ at a carbon 18 position.

69. The method of claim 65, wherein the pepluane comprises a composition selected from the group consisting of a 5,8,9,10,14-pentaacetoxy-3-benzoyloxy-15-hydroxyypepluane, a derivative of a 5,8,9,10,14-pentaacetoxy-3-benzoyloxy-15-hydroxyypepluane and a pharmaceutically acceptable salt of a 5,8,9,10,14-pentaacetoxy-3-benzoyloxy-15-hydroxyypepluane.

70. The method of claim 33, wherein the compound comprises a composition selected from the group consisting of a paraliene, a paraliene derivative and a pharmaceutically acceptable salt of a paraliene or a paraliene derivative.

71. The method of claim 70, wherein the paraliene derivative comprises an ester derivative.

72. The method of claim 70, wherein the paraliene derivative comprises an acetylated derivative.

73. The method of claim 70, wherein the paraliene derivative comprises a substitution in a position in a paraliene skeleton selected from the group consisting of

- an -H, an -H₂ or an -OAc (-OCH₃CO) at a carbon 1 position;
- a -CH₃ and an -H or a -CH₃ and an -OAc (-OCH₃CO) at a carbon 2 position;
- an -OBz at a carbon 3 position;
- an -H at a carbon 4 position;
- an -OAc (-OCH₃CO) at a carbon 5 position;
- a -CH₃ or a -CH₂OAc at a carbon 6 position;
- an -H₂ at a carbon 7 position;
- an -H or an -OAc (-OCH₃CO) at a carbon 8 position;
- an = O at a carbon 9 position;
- a -(CH₃)₂ at a carbon 10 position;
- an -H₂ at a carbon 11 position;
- an -H at a carbon 12 position;
- a -CH₃ at a carbon 13 position;
- an -OAc (-OCH₃CO) at a carbon 14 position; and,
- an -OH at a carbon 15 position.

02
Concl.

74. The method of claim 33, wherein the compound comprises a composition selected from the group consisting of a angeloyl-substituted ingenane, a angeloyl-substituted ingenane derivative and a pharmaceutically acceptable salt of a angeloyl-substituted ingenane or a angeloyl-substituted ingenane derivative.

75. The method of claim 74, wherein the angeloyl-substituted ingenane derivative comprises an ester derivative.

76. The method of claim 74, wherein the angeloyl-substituted ingenane derivative comprises an acetylated derivative.

77. The method of claim 74, wherein angeloyl-substituted ingenane is selected from the group consisting of a 20-O-acetyl-inganol-3-angelate, an acetylated derivative of a 20-O-acetyl-inganol-3-angelate and an ester derivative of a 20-O-acetyl-inganol-3-angelate.

78. The method of claim 33, wherein the cancer is a skin cancer.

79. The method of claim 78, wherein the skin cancer is a malignant melanoma.

80. The method of claim 78, wherein the skin cancer is a Merkel cell carcinoma.

81. The method of claim 78, wherein the skin cancer is a squamous cell carcinoma.

82. The method of claim 78, wherein the skin cancer is a basal cell carcinoma.

83. The method of claim 78, wherein the skin cancer is a solar keratosis.

84. The method of claim 33, wherein the cancer is a solid tumor.

Q2
WKL

85. The method of claim 33, wherein the cancer is a lung cancer.

86. The method of claim 33, wherein the cancer is a colon cancer.

87. The method of claim 33, wherein the cancer is a prostate cancer.

88. The method of claim 33, wherein the cancer is a cervical cancer.

89. The method of claim 33, wherein the cancer is a breast cancer.

90. A method of treating a subject with a cancer, the method comprising administering to the subject an effective amount of at least two compounds, wherein the two compounds are derived from an extract from the sap of a species of *Euphorbia*, wherein the compounds

(a) are extractable from the *Euphorbia* sap in the presence of about 95% v/w ethanol,

(b) have cell inhibiting or retarding activity which is neither destroyed by acetone nor by heating at about 95°C for about 15 minutes, and

(c) are capable of inhibiting the growth of at least one cell line selected from the group consisting of MM96L, MM229, MM220, MM537, MM2058, HeLa, B16, LIM1215, A549, MCF7, MCC16 and Colo16.

91. The method of claim 90, wherein the compounds are selected from the group consisting of a jatropane, a jatropane derivative, a pharmaceutically acceptable salt of a jatropane, a pepluane, a pepluane derivative, a pharmaceutically acceptable salt of a pepluane, a paraliane, a paraliane derivative, a pharmaceutically acceptable salt of a paraliane, an angeloyl-substituted ingenane, an angeloyl-substituted ingenane derivative and a pharmaceutically acceptable salt of an angeloyl-substituted ingenane.

92. The method of claim 90, wherein the compounds are selected from the group consisting of a 5,8,9,10,14-pentaacetoxy-3-benzoyloxy-15-hydroxyepeluane (pepluane), a derivative of a 5,8,9,10,14-pentaacetoxy-3-benzoyloxy-15-hydroxyepeluane, a 2,3,5,7,15-pentaacetoxy-9-nicotinoyloxy-14-oxojatropha-6(17),11E-diene (jatrophane 1), a derivative of a 2,3,5,7,15-pentaacetoxy-9-nicotinoyloxy-14-oxojatropha-6(17),11E-diene, a 2,5,7,8,9,14-hexaacetoxy-3-benzoyloxy-15-hydroxy-jatropha-6(17),11E-diene (jatrophane 2), a derivative of a 2,5,7,8,9,14-hexaacetoxy-3-benzoyloxy-15-hydroxy-jatropha-6(17),11E-diene, a 2,5,14-triacetoxy-3-benzoyloxy-8,15-dihydroxy-7-isobutyroyloxy-9-nicotinoyloxy-jatropha-6(17),11E-diene (jatrophane 3), a derivative of a 2,5,14-triacetoxy-3-benzoyloxy-8,15-dihydroxy-7-isobutyroyloxy-9-nicotinoyloxy-jatropha-6(17),11E-diene, a 2,5,9,14-tetraacetoxy-3-benzoyloxy-8,15-dihydroxy-7-isobutyroyloxyjatrophane-6(17),11E-diene (jatrophane 4), a derivative of a 2,5,9,14-tetraacetoxy-3-benzoyloxy-8,15-dihydroxy-7-isobutyroyloxyjatrophane-6(17),11E-diene, a 2,5,7,14-tetraacetoxy-3-benzoyloxy-8,15-dihydroxy-9-nicotinoyloxyjatrophane-6(17),11E-diene (jatrophane 5), a derivative of a 2,5,7,14-tetraacetoxy-3-benzoyloxy-8,15-dihydroxy-9-nicotinoyloxyjatrophane-6(17),11E-diene, a 2,5,7,9,14-pentaacetoxy-3-benzoyloxy-8,15-dihydroxyjatrophane-6(17),11E-diene (jatrophane 6), a derivative of a 2,5,7,9,14-pentaacetoxy-3-benzoyloxy-8,15-dihydroxyjatrophane-6(17),11E-diene, a 20-O-acetyl-ingenol-3-angelate, a derivative of a 20-O-acetyl-ingenol-3-angelate and pharmaceutically acceptable salt of one or any combination of these compounds.

93. The method of claim 90, wherein the compounds are provided in the form of a chemical fraction obtained from the sap of a species of *Euphorbia*.

94. The method of claim 33, wherein the compound further comprises a beta-alanine betaine or a hydroxy-dimethyl proline.

95. The method of claim 33, wherein the compound is capable of inhibiting or retarding the growth of MM96L cells.

ney's Docket No.: 07404-003001

97. The method of claim 33, wherein the compound is capable of inducing normal melanocytes and/or T cells to proliferate.

98. The method of claim 33, wherein the compound is provided in the form of a composition comprising a pharmaceutically- or cosmetically-acceptable carrier.

99. The method of claim 98, wherein the pharmaceutically- or cosmetically-acceptable carrier is selected from a β -alanine betaine hydrochloride and a t-4-hydroxy-N,N-dimethylproline.--